



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,693	11/13/2003	Peter Jung	L&L-10028	9112

24131 7590 08/11/2006

LERNER GREENBERG STEMER LLP
P O BOX 2480
HOLLYWOOD, FL 33022-2480

EXAMINER

NGUYEN, TUAN HOANG

ART UNIT	PAPER NUMBER
----------	--------------

2618

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,693

Applicant(s)

JUNG ET AL.

Examiner

Tuan H. Nguyen

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/13/03 & 12/8/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 11/13/2003 and 12/8/2003 has been considered by Examiner and made of record in the application file.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-2, 8-9, and 13 are rejected under 35 U.S.C. 102(a) as being anticipated by Motoyasu et al. (Japan Publication Number 2001-77723, which is translated by Australian Patent Application No. AU 200056498 hereinafter, "Motoyasu", submitted by applicant).

Consider claim 1, Motoyasu teaches a method for multi-subscriber detection using a RAKE receiver structure having a fixed time offset between the RAKE fingers, which comprises the step of: mapping a multi-subscriber system matrix onto the RAKE receiver structure by allocating each of the RAKE fingers to a defined section of the multi-subscriber system matrix (see fig. 8 page 1 lines 9-28); and deactivating at least one of the RAKE fingers for reducing power consumption of the RAKE receiver structure during operation (page 3 lines 6-16).

Consider claims 8 and 13, Motoyasu teaches a RAKE receiver structure for multi-subscriber detection, comprising: rake fingers (see fig. 1 page 7 lines 13-19); and a switch connected to and deactivating at least one of RAKE fingers for reducing power consumption during operation (page 3 lines 6-16).

Consider claims 2 and 9, Motoyasu further teaches measuring energy levels of signals associated with RAKE fingers; and determining which of RAKE fingers are to be deactivated, in dependence on the energy levels measured (page 11 lines 24-27).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-5, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoyasu et al. (Australian Patent Application No. AU 200056498 hereinafter, "Motoyasu") in view of Iyer (U.S. PAT. 7,031,373).

Consider claim 3, Motoyasu teaches a method for multi-subscriber detection using a RAKE receiver structure having a fixed time offset between the RAKE fingers.

Motoyasu does not explicitly show that determining a value of an assessment variable which is characteristic of a quality of service of a detected signal; and determining a number of active RAKE fingers in dependence on a the value of the assessment variable.

In the same field of endeavor, Iyer teaches determining a value of an assessment variable which is characteristic of a quality of service of a detected signal; and determining a number of active RAKE fingers in dependence on a the value of the assessment variable (col. 3 lines 25-41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, determining a value of an assessment variable which is characteristic of a quality of service of a detected signal; and determining a number of active RAKE fingers in dependence on a the value of the assessment variable, as taught by Iyer, in order to provide for controlling multiple receiver fingers, and more particularly to CDMA receivers in a wireless communication system that have a plurality of receiver fingers for receiving a plurality of different channel types.

Consider claim 4, Iyer further teaches forming the assessment variable as a bit error rate (BER) (col. 4 lines 38-50).

Consider claim 5, Iyer further teaches the method is used in a mobile station in a mobile radio system (col. 2 lines 34-37).

Consider claims 10 and 15, Iyer further teaches determining an assessment variable which is characteristic of a quality of service of a detected signal (col. 3 lines 25-41); and determining which of RAKE fingers are to be deactivated, in dependence on a determined assessment variable (col. 2 lines 27-37).

7. Claims 6-7, 11-12, 14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoyasu et al. (Australian Patent Application No. AU 200056498 hereinafter, "Motoyasu") in view of Misra et al. (U.S PAT. 6,831,944 hereinafter, "Misra").

Consider claim 14, Motoyasu teaches control and assessment unit measuring energy levels of signals associated with RAKE fingers (page 11 lines 24-27), control and assessment unit determining which of RAKE fingers are to be deactivated, in dependence on the energy levels measured (page 12 lines 3-16).

Motoyasu does not explicitly show that a channel estimator coupled to rake fingers; and a control and assessment unit coupled to rake fingers, channel estimator.

In the same field of endeavor, Misra teaches a channel estimator coupled to rake fingers (col. 2 lines 36-42); and a control and assessment unit coupled to rake fingers, channel estimator (col. 2 lines 49-56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, a channel estimator coupled to rake fingers; and a control and assessment unit coupled to rake fingers, channel estimator, as taught by Misra, in order to provide a plurality of transmitted data signals are received at a receiver.

Consider claims 6, 11, and 16, Motoyasu teaches a method for multi-subscriber detection using a RAKE receiver structure having a fixed time offset between the RAKE fingers.

Motoyasu does not explicitly show that a calculating unit coupled to rake fingers for calculating multi-subscriber equalizer coefficients for ZF equalization of received signals.

In the same field of endeavor, Misra teaches a calculating unit coupled to rake fingers for calculating multi-subscriber equalizer coefficients for ZF equalization of received signals (col. 1 lines 37-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, a calculating unit coupled to rake fingers for calculating multi-subscriber equalizer coefficients for ZF equalization of received

Art Unit: 2618

signals, as taught by Misra, in order to provide a plurality of transmitted data signals are received at a receiver.

Consider claims 7, 12, and 17, Misra further teaches calculating multi-subscriber equalizer coefficients for MMSE equalization of received signals.

Conclusion

8. Any response to this action should be mailed to:

Mail Stop_____ (Explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Facsimile responses should be faxed to:

(571) 273-8300

Hand-delivered responses should be brought to:

Customer Service Window

Randolph Building

401 Dulany Street


Alexandria, VA 22313

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Nguyen whose telephone number is (571) 272-8329. The examiner can normally be reached on 8:00Am - 5:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maung Nay A. can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information Consider the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan Nguyen
Examiner
Art Unit 2618

 8/7/06
QUOCHIEN B. VUONG
PRIMARY EXAMINER